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GC-MS ANALYSIS OF VIBURNUM OPULUS (L) EXTRACT AND ITS TOXICITY STUDIES IN RATS

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This study was aimed at establishing the antimicrobial and phytochemical profiles of Viburnum opulus (L) as well as the safety potential of the extract in albino Wistar rats. Ethanol, n-hexane, ethyl acetate, butanol and water fractions were prepared for both phytochemical assessment using gas chromatography-mass spectrum analysis (GC-MS)[1]. Five groups of seven rats were used for the study. Group A received distilled water (control), while groups B to E were treated respectively with 250, 500, 1000 and 1500 mg/kg body weight of V. opulus extract by abdominal canulisation for 28 days[2]. Blood samples were obtained for biochemical analyses and the liver tissues were further processed for histological studies. The GC-MS spectra revealed the existence of various phytoconstituents such as neophytadiene, germaciene, caryophyllene among others. High density lipoprotein and albumin were significantly ($p < 0.05$) elevated in animals administered with 500, 1000 and 1500 mg/kg bw of the leaf extract. Ethanol, butanol and water fractions of the leaf of V. opulus showed antimicrobial action against most of the organisms used in this study. The result indicates the V. opulus leaf extract contains a wild range of fatty acids and heterocyclic compounds with antimicrobial efficacy and no hepatic damage.

[1] Adebayo AH, Aliyu R, Gatsing D, Garba IH. Int. J. Pharmacol 2006; 2: 618 – 622.

[2] Adebayo AH, Abolaji AO, Opata TK and Adegbenro IK. Afr. J. Biotechnol 2010; 9: 2145 – 2150.

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